

CLAIMS

1. Method for constructing and viewing computer model image, comprising the following stages:

- 5 - defining and applying display attributes for the objects comprising the model,
 - storing the aforementioned attributes in a memory,
 - displaying the image on a viewing screen (1),

Characterized in that,

the following actions are performed:

- 10 - selection of at least one image zone,
 - display of the part of the image located outside the selected zone (2) with the current display attributes,
 - definition of the specific display attributes for the objects to be displayed inside the selected zone (2),
15 - display of the part of the image located in the selected zone (2) with the specific display attributes.

2. Method for constructing and viewing a computer model image according to claim 1,

20 Characterized in that,

The image located outside of selected zone (2) is displayed by creation of a mask corresponding to the aforementioned selected zone (2).

3. Method for constructing and viewing a computer model image according to any of claims 1 or 2,

25 Characterized in that,

The specific display attributes are defined by application of a function (f) of the distance between the object to be displayed and the screen plane.

30 4. Method for constructing and viewing a computer model image according to claim 3,

Characterized in that,

The objects for which the value of function (f) is less than a predefined threshold are deleted from the list of the objects to be displayed.

5. Method for constructing and viewing a computer model image according to any of claims 3 or 4,

Characterized in that,

5 The defined specific display attributes are stored for maintaining their application to the objects to be displayed even after modification from the image viewpoint.

6. Method for constructing and viewing a computer model image according to any of claims 1 to 5,

Characterized in that,

10 The display attributes include an opacity value.

7. Method for constructing and viewing a computer model image according to any of claims 1 to 6,

Characterized in that,

15 The display attributes include a Boolean visibility value.

8. Method for constructing and viewing a computer model image according to any of claims 1 to 7,

Characterized in that,

20 The list of the objects to display is determined by selecting the objects of the model projected in the selected zone (2).

9. Method for constructing and viewing a computer model image according to claim 8,

25 Characterized in that,

The selection of the objects to be displayed is refined by deleting the objects less than a predetermined distance from the screen plane.

10. Method for constructing and viewing a computer model image according to any of claims 1 to 9,

30 Characterized in that,

The current display attributes are stored before definition of the specific display attributes for later use.

11. Method for constructing and viewing a computer model image according to any of claims 1 to 10,

Characterized in that,

Selected zone (2) is linked to the objects to be displayed so that they still correspond
5 whatever the changes of the viewpoint position.

12. Method for constructing and viewing a computer model image according to any of claims 1 to 11,

Characterized in that,

10 The selection of the image zone is modified by moving the zone (2).

13. Method for constructing and viewing a computer model image according to any of claims 1 to 12,

Characterized in that,

15 The selection of the image zone is modified by changing the dimension of zone (2).

14. Method for constructing and viewing a computer model image according to any of claims 1 to 11,

Characterized in that,

20 The selection of the image zone is modified by changing the position of the screen plane.

15. Method for constructing and viewing a computer model image according to any of claims 1 to 11, characterized in that,

25 The selection of the image zone is modified by moving the computer model in the screen plane.

16. Device for constructing and viewing a computer model image including:

- means for defining and applying the display attributes of the objects constituting the
30 model,

- a memory capacity for data storage,

- a screen (1) for viewing and means for displaying the image on aforementioned screen (1),

capable of implementing the method according to any of claims 1 to 15,

Characterized in that,

It also includes a man-machine interface (3) with means for selecting at least one zone of the image and means for data input of at least one parameter for defining the specific display attributes for the objects to be displayed in selected zone (2),

- 5 for displaying the part of the image located outside selected zone (2) with the current display attributes, and displaying the part of the image located inside selected zone (2) with the specific display attributes.

17. Device according to claim 16,

- 10 Characterized in that,

The means for data input comprise means for selecting a function (f) of the distance between the object to be displayed and the screen plane of the image to be applied for the definition of the specific display attributes.

15 18. Device according to claim 17,

Characterized in that,

The means of data input comprise means for inputting a threshold value in order to delete from the list of objects to be displayed those for which the value of the function (f) is less than the said threshold.

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19. Device according to any of claims 16 to 18, characterized in that,

The selection zone is a disc.

20. Device according to claim 19,

- 25 characterized in that,

The man-machine interface (3) includes means for adjusting the radius of the selection zone.

21. Device according to any of claims 16 to 20,

- 30 characterized in that,

It includes means for the local processing of objects illumination.